



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/736,539	12/17/2003	Alberto Conte	Q78908	5652
23373 7590 08/15/2007 SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			EXAMINER AHMED, SALMAN	
			ART UNIT 2616	PAPER NUMBER
			MAIL DATE 08/15/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/736,539

Applicant(s)

CONTE ET AL.

Examiner

Salman Ahmed

Art Unit

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 June 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 6/18/2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claims 1-9 are pending.

Claims 1-9 are rejected.

Specification

1. The abstract of the disclosure is objected to because Abstract line 5 has the word "said". Correction is required. See MPEP § 608.01(b).

Drawings

2. The drawings are objected to under 37 CFR 1.83(a) because they fail to show "module 14 (specification page 5 last paragraph and page 6 second and third paragraphs)" as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the

renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-4 and 7-9 are rejected under 35 U.S.C. 102(e) as being anticipated by Leigh (US PAT PUB 2003/0158940, hereinafter Leigh).

In regards to claim 1, Leigh anticipates *a method for use in a router* (Figure 1d ILBs 20 or 30 or 40 and page 4 section 0033, every ILB contains sufficient intelligence to route incoming network traffic i.e. they have routing capability) *of configuring a routing path to an address* (page 7 section 0052, a topology update system will support changes in the ILB topology (*routing path*) in the internal network, such as connecting an ILB port (*an address is associated with the port*), adding an ILB, disconnecting an ILB port (*an address is associated with it*), or removing an ILB) *in an IP network* (page 9

section 0059, , IP layer (Layer-3) associated with IP network) *using a routing control unit* (Figure 1, Master ILB 10 or 50) *separate from the router* (Figure 1d ILBs 20 or 30 or 40 and page 4 section 0033, every ILB contains sufficient intelligence to route incoming network traffic i.e. they have routing capability), *the method comprising the steps of: the router* (Figure 1d ILBs 20 or 30 or 40 and page 4 section 0033, every ILB contains sufficient intelligence to route incoming network traffic i.e. they have routing capability) *sending the routing control unit* (Figure 1, Master ILB 10 or 50) *a routing path to address* (page 7 section 0054 and page 8 section 0056, The new ILB port will then recognize that it is coupled to a new ILB, query the new ILB for its information, and relay the new ILB information (port address, ILB ID, host server ID, i.e. *routing path to address*) to the primary master ILB in a roll-call-addition-request packet); *the routing control unit sending the router a validation message* (page 7 section 0054 and page 8 section 0056, The primary master ILB will send back a roll-call-addition-response packet (*validation message*)); *and configuring the selected routing path in the router* (page 7 section 0054 and page 8 section 0056, If the primary master ILB successfully added the new ILB, then it will broadcast a roll-call-addition-update packet to all the ILBs about the new ILB, so that their topology map is updated with the new ILB information (*configuring the selected routing path*)).

In regards to claim 7, Leigh anticipates *an IP* (page 9 section 0059, IP layer (Layer-3) associated with IP network) *router* (Figure 1d ILBs 20 or 30 or 40 and page 4 section 0033, every ILB contains sufficient intelligence to route incoming network traffic i.e. they have routing capability) *comprising: means for selecting a routing path to an IP*

Art Unit: 2616

address (page 7 section 0054, Leigh discloses when an ILB is added, a new network segment is coupled from a port of the new ILB to an open port of an ILB that is already part of the internal network. The new ILB port will then recognize that it is coupled to a new ILB, query the new ILB for its information (*routing path*). Furthermore, Ports connecting ILBs in an IP network inherently has IP address' associated with it); *means for sending the selected routing path over the network* (page 7 section 0054, the new ILB port will then recognize that it is coupled to a new ILB, query the new ILB for its information, and relay the new ILB information (port address, ILB ID, host server ID, i.e. *routing path*) to the primary master ILB in a roll-call-addition-request packet); *means for receiving via the network a message validating the selected routing path* (page 7 section 0064, The primary master ILB will send back a roll-call-addition-response packet with approval code, if the primary master ILB can add a new ILB to the internal network); *and means for configuring the selected routing path in the router on receiving a validation message in respect of routing path* (page 7 section 0054, If the primary master ILB successfully added the new ILB, then it will broadcast a roll-call-addition-update packet to all the ILBs about the new ILB, so that their topology map is updated with the new ILB information).

In regards to claim 2, Leigh anticipates *the router selects the routing path sent in step a) as a function of information* (port address, ILB ID, host server ID) *received by the router and concerning routing to address* (page 7 section 0054, the new ILB port will then recognize that it is coupled to a new ILB, query the new ILB for its information, and

relay the new ILB information (port address, ILB ID, host server ID) to the primary master ILB in a roll-call-addition-request packet).

In regards to claim 3, Leigh anticipates *the routing control unit executes step b) at a time determined as a function of the state of the traffic in the network* (page 7 section 0054, page 8 section 0056, If the primary master ILB is too busy when it receives a roll-call-addition-request packet, then it can send a roll-call-addition-response packet with wait code that may include the wait time. The ILB will issue a roll-call-remove-request packet to the primary master ILB, which will respond with a roll-call-remove-response packet and will stop sending additional loads to the requesting ILB).

In regards to claim 4, Leigh anticipates *the routing control unit executes step b) after a data stream to be delivered to address for which resources have been reserved along a path across the network has passed through the router* (page 8 section 0056, The ILB will issue a roll-call-remove-request packet to the primary master ILB, which will respond with a roll-call-remove-response packet and will stop sending additional loads to the requesting ILB. After the requesting host server finishes processing the load already distributed to it, its ILB sends a roll-call-removed packet to the primary master ILB. If this roll-call-removed packet traverses through other ILB ports to get to the primary master ILB, then all the ILB ports that this packet passes through will intercept the disconnected ILB port information. In this manner, all the ILBs will have the updated topology information).

In regards to claim 8, Leigh anticipates *an IP* (page 9 section 0059, IP layer (Layer-3), associated with an IP network) *network comprising at least a router* (Figure 1d ILBs 20

or 30 or 40 and page 4 section 0033, every ILB contains sufficient intelligence to route incoming network traffic, i.e. they have routing capability) *and a routing control unit* (Figure 1, Master ILB 10 or 50) *separate from the router, in which network the router and the control unit employ the method according to claim 1.*

In regards to claim 9, Leigh anticipates *the control unit and the router communicate via the IP network* (page 9 section 0059, IP layer (Layer-3), associated with IP network).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Art Unit: 2616

7. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Leigh in view of Sharma et al. (US PAT PUB 2002/0093961, hereinafter Sharma).

In regards to claim 5, Leigh teaches the routing control unit executes step b) as described in the rejections of claim 1 above.

Leigh does not explicitly teach routing control unit instigating further reservation of resources along the selected routing path in the network for a data stream to be delivered to address for which resources have already been reserved along a path across the network.

Sharma in the same field of endeavor teaches the Central Protocol Manager 206 (routing control unit) is further operative to receive the topology data from the Routing Topology Manager 208 (Routing Topology Manager 208 is operative to acquire data relating to the topology of the communications network 102), deduce changes in the network topology therefrom, and suitably establish/modify/tear-down (instigating further reservation of resources along the selected routing path in the network for a data stream to be delivered to address) the data paths based on the deduced changes (page 3 section 0021).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Leigh's routing control unit to reserve resources relating to topology change as suggested by Sharma. The motivation is that (as suggested by Sharma, see page 1 section 0004 and page 2 section 0008) such reservation of resource scheme will streamline the steps to have a highly available communications system that is capable of efficient circuit reestablishment and tear-down without

Art Unit: 2616

requiring manual intervention by an operator of the communications system and topology changes such as node additions and node deletions may therefore be detected and established and communications paths may be modified to incorporate such changes without necessitating the tear-down of data paths that are still viable despite those changes.

8. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Leigh in view of Ogier et al. (US PAT PUB 2003/0179742 hereinafter Ogier).

In regards to claim 6, Leigh teaches receiving validation message for topology changes as described in the rejection of claim 1 above.

Leigh does not explicitly teach forwarding the router sending the selected routing path to at least one other router.

Ogier in the same field of endeavor teaches forwarding topology updates to neighboring nodes (page 1 section 0010).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Leigh's router forwarding topology updates to neighboring nodes as suggested by Ogier. The motivation is that (as suggested by Ogier, page 1 section 0010) to effectively route messages through dynamically changing networks, routers need to remain informed of topology and link-state changes.


Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Salman Ahmed whose telephone number is (571) 272-8307. The examiner can normally be reached on 8:00 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on (571) 272-3088. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SA
Salman Ahmed
Patent Examiner
8/6/2007


HASSAN KIZOU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600